

REMARKS

Reexamination and reconsideration of claims 20-39 are respectfully requested. Moreover, the acceptance and entering of the Reply dated May 14, 2003 into the record by the Primary Examiner is acknowledged with appreciation in this continuation application.

Claims 20-39 were rejected under 35 U.S.C. sec. 103(a) applying U.S. Pat. No. 5,602,953 ('953) in view of the U.S. Pat. No. 5,703,984 ('984). For patents to be applicable under sec. 103(a), the combination of teachings must, *inter alia*, expressly or inherently, teach, disclose, or suggest each and every feature of the claimed invention. Additionally, motivation and suggestion to combine the patents must be present.

Applicant respectfully submits that the Office Action did not make a *prima facie* case of obviousness because the skilled artisan would not be motivated to make the purported modification. The fact of the matter is that the objective evidence of record teaches away from the purported modification.

Page 3 of the Office Action dated August 13, 2003 cites the '984 patent and specifically Col. 1, ll. 35-50, which is reproduced below.

The major problem posed by cables of microsheath structure lies in the fact that, since the forces applied to the cable are distributed over all of the optical fibers, they degrade both the mechanical characteristics of the optical fibers, and also their transmission properties, in particular because they are subjected to much bending and micro-bending due to the fact that they are held tightly in supporting sheaths. It has been observed that, to avoid such degradation, in particular when the cable is to be installed in long lengths, it is necessary to provide strength members for the structure, and to cause the fibers in each module to be mechanically decoupled from the supporting sheath thereof, which means that the optical fibers must be left loose in each module, thereby reducing the compactness of the finished cable. Furthermore, bending and micro-bending shortens the life of the

optical fibers.

First, this disclosure in the '984 patent discusses a particular fiber optic cable design, namely, a microsheat cable and its major problem. The microsheat cable design has its optical fibers held tightly in supporting sheaths, thereby resulting in optical attenuation during bending. The disclosure states "...to avoid such [optical transmission] degradation, in particular when the cable is installed in long lengths, it is necessary to provide strength members for the structure, and to cause the fibers in each module to be mechanically decoupled from the supporting sheath thereof, which means that the optical fibers must be left loose in each module..."

It is respectfully submitted that the skilled artisan would not have taken a suggestion, nor have been motivated, to modify the '953 patent with the disclosure of the '984 patent for several reasons. First, the '953 patent is not directed to a microsheat cable design. Moreover, the '953 patent does not have the major problem of the microsheat cable, namely, tightly held fibers. In other words, the microsheat cable has bending/optical attenuation issues because the optical fibers are held tightly in a supporting sheath. The '953 patent does not have optical fibers held tightly in a supporting sheath, as discussed in the disclosure of the '984 patent. Therefore, the skilled artisan would not have taken a suggestion, nor have been motivated, to make the purported modification of the '953 patent with the disclosure of the '984 patent.

Clearly, the skilled artisan would have understood that the '953 patent is directed to a composite cable using a loose tube construction in each strand 3, rather than being tightly held. See Figs. 1 and 2 of the '953 patent. Moreover, other conclusive objective evidence of record supports the fact that the composite cables of the '953 patent use a loose tube construction. Specifically, the '953 patent states "...an optical communication

line 9 in the form of a bundled lead with two optical waveguides 11 each for example, which are loosely placed in a plastic shell 13." Since optical waveguides 11 are loosely placed in plastic shell 13 the skilled artisan would not have taken a suggestion, nor been motivated, to include strength members in shell 13 in order to decouple optical waveguides 11 from shell 13 or the jacket 15. In other words, the skilled artisan would have understood that the optical waveguides of the '953 patent are already decoupled.

Moreover, the skilled artisan would have understood that each strand 3 of the '953 patent has adequate tensile strength, even when strands 3 are separated. In other words, the skilled artisan would have understood that each strand 3 of the '953 patent includes electrical communication lines (copper wires) that provide the necessary tensile strength for each individual strand 3. Therefore, s/he would not have taken a suggestion, nor been motivated, to provide strength members for the purpose of tensile strength.

For at least the reasons stated, the disclosure of the '984 patent teaches away from the purported modification of the '953 patent with the disclosure in '984 patent. Stated another way, the optical waveguides 11 of the '953 patent are already decoupled and each strand 3 of the cables in the '953 patent already include tensile members. Because the skilled artisan would not have taken a suggestion, nor been motivated, to make the purported modification, the Office Action failed to make a *prima facie* case of obviousness. For at least the reasons stated, withdrawal of the sec. 103(a) rejection of claims 20-39 is warranted and is respectfully requested.

Additionally, the Conclusion of the Office Action states that "Cheron et al states that it is well known in the art to provide strength members with optical fibers for decoupling the optical fibers from the sheath (lines 15-20 of column 1)."

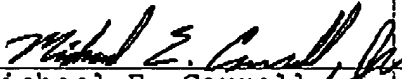
Although this reference is not relied upon, Applicant would point the Primary Examiner's attention to the next paragraph of Cheron et al for understanding of the cited passage.

No fees are believed due in connection with this Reply. If any fees are due in connection with this Reply, please charge any fees, or credit any overpayment, to Deposit Account Number 19-2167.

Allowance of all pending claims is believed to be warranted and is respectfully requested.

The Examiner is welcomed to telephone the undersigned to discuss the merits of this patent application.

Respectfully submitted,


Michael E. Carroll, Jr.
Attorney
Reg. No. 46,602
P.O. Box 489
Hickory, N. C. 28603
Telephone: 828/901-6725

Date: November 13, 2003